FACT SHEET

DATE: May 21, 2014
FACILITY: Lawrence Wakarusa MWWTP
KANSAS PERMIT No.: M-KS31-0003
FEDERAL PERMIT No.: KS0099031
LOCATION: SW¼, Section 16, T13S, R20E, Douglas County, Kansas

PROPOSED ACTION: The proposed action consists of re-issuance of an existing Kansas/NPDES Water Pollution Control permit for an existing facility.

EXISTING PERMIT: The existing permit was issued for a design flow of 7.0 MGD and included effluent limits for biochemical oxygen demand, total suspended solids, pH, ammonia, nutrients, dissolved oxygen, whole effluent toxicity and E. coli. Monitoring of daily flow and a priority pollutant scan was also required.

FACILITY DESCRIPTION: The facility has previously been permitted, but has not yet been constructed. The new facility will be a mechanical treatment plant consisting of screening and grit removal, a flow equalization basin, complete mix aeration BNR activated sludge process with pre-anoxic, anaerobic, anoxic and oxic zones, final clarifiers, UV disinfection and an effluent re-aeration outfall structure. The facility will receive domestic wastewater from residential and commercial areas and industrial wastewater from local manufacturers. Sludge will be land applied. Phased construction and operation of the facility will be considered. However, the permit limits are based on the currently considered maximum dry weather design flow of 7.0 MGD.

RECEIVING STREAM: The Lawrence Wakarusa wastewater treatment plant discharges to the Wakarusa River (HUC 10270104-24). Pursuant to the Kansas Surface Water Quality Standards K.A.R 28-16-28 (b-g), the first classified stream is the Wakarusa River (Segment 24) and is designated for expected aquatic life use, domestic water supply, food procurement, groundwater recharge, industrial water supply, irrigation and livestock watering, and primary "B" contact recreation.

PROPOSED LIMITS: The proposed permit is based upon an average discharge flow of 7.0 MGD to the Wakarusa River. The permit retains the existing limits for TSS and pH. Water quality based limits are established for biochemical oxygen demand, ammonia, total phosphorus, total nitrogen, whole effluent toxicity and e. coli. Monitoring will continue to be required for influent and effluent daily flow. The dissolved oxygen requirement has been dropped since the facility includes an effluent re-aeration outfall structure which will assure adequate re-oxygenation of the effluent prior to mixing with the receiving stream water.

This facility is designed and will be constructed to provide nutrient removal. The permittee's current permit requires it to operate the facility to achieve annual daily average concentration limits of 8.0 mg/l total nitrogen and 1.5 mg/l total phosphorus. Since the current permit was written, KDHE has determined that slightly higher total nitrogen limits (10.0 mg/l) and slightly lower total phosphorus limits (1.0 mg/l) will also satisfy the water quality designated uses for the receiving stream and provide the designers of the facility some options for final design and operation of the new plant.

Whole Effluent Toxicity and heavy metals testing will be required annually. A Priority Pollutant Scan will be required to be performed at least once during the life of the permit. KDHE retains the right to increase or decrease testing requirements based upon the test results and require the permittee to conduct investigations and correction of any toxic conditions caused in the receiving stream by the facility's effluent.

The basis of the effluent limits and monitoring applied in this NPDES permit are as follows:

Parameter	Basis
Biochemical Oxygen Demand	KS Surface Water Quality Standards
Total Suspended Solids	EPA Secondary Treatment Regulation
Ammonia	KS Surface Water Quality Standards
E. coli	KS Surface Water Quality Standards
Nutrients	Kansas Nutrient Reduction Plan
pH	EPA Secondary Treatment Regulation
Whole Effluent Toxicity	KS Surface Water Quality Standards

SUPPLEMENTAL INFORMATION: The draft permit also contains a Supplemental Information section which describes the City's *Wastewater Facility Master Plan* ("Plan") looking at future wastewater needs, prioritizing the needs, and projecting the cost for funding the needed system-wide improvements. The plan is in response to EPA's June 5, 2012 published *Integrated Municipal Stormwater and Wastewater Planning Approach Framework* ("Framework"). The stated purpose of the Framework is to "*assist municipalities on their critical paths to achieving the human health and water quality objectives of the Clean Water Act by identifying efficiencies in implementing requirements that arise from distinct wastewater and stormwater programs, including how to best prioritize capital investments.*"

The Lawrence Plan contains all components required in the Framework and was adopted as the initial Integrated Plan and the core document for future modifications. The Kansas Department of Health and Environment (KDHE) technical and legal staff have reviewed and approved the Plan. KDHE and the City have entered into a Memorandum of Understanding (MOU) to acknowledge and agree upon the Plan and

schedule. Administration of the Plan will be pursuant to the terms of the MOU.

SCHEDULE OF COMPLIANCE: A schedule of compliance is included in the permit to require the permittee to conduct a study to assess the effects of the discharges from this facility on the biota of the receiving stream downstream of the plant outfall.

303(d) LIST: The 2012 Kansas Water Quality Limited Segments (303(d) List) shows the receiving stream, the Wakarusa River, Segment 24, is impacted by total suspended solids. In addition, a TMDL has been written for bacteria impairments. The draft permit has addressed these impairments as appropriate.

SLUDGE: The sludge produced at this facility will be land applied. All sludge reuse or disposal shall be in compliance with the 40 CFR Part 503 Sludge Regulations.

CERTIFIED OPERATOR: The facility employs multiple operators with the correct level of certification (Class IV) for this size of treatment facility.

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